

An Investigation of Selected Psychological Variables Among Women Yoga and Non-Yoga Practitioners

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Abstract- The present study aimed to investigate the impact of yoga practice on selected psychological variables—loneliness, anxiety, depression, and stress—among women aged 35 to 40 years in the Shivamogga and Chikkamagaluru districts of Karnataka. A total of 200 participants were selected through purposive sampling, comprising 100 yoga practitioners and 100 non-yoga practitioners equally distributed across both districts. Standardized tools were used to measure the psychological variables: the UCLA Loneliness Scale, Beck Anxiety Inventory, Zung Self-Rating Depression Scale, and Perceived Stress Scale. The results revealed that women practicing yoga consistently reported lower mean scores across all psychological variables compared to non-yoga women. Independent sample t-tests indicated statistically significant differences in anxiety, depression, and stress ($p < 0.05$), while differences in loneliness were not significant. The findings align with existing literature, highlighting yoga's positive influence on emotional regulation and psychological well-being. The study concludes that regular yoga practice is an effective, non-pharmacological approach to enhance mental health among women, and recommends its integration into community health and wellness programs.

Keywords- Yoga, Women's Mental Health, Anxiety, Depression, Stress

I. INTRODUCTION

The increasing pace of modern life, coupled with societal expectations and role transitions, has significantly affected the psychological well-being of women. In many societies, women are required to simultaneously balance professional careers, family responsibilities, and social obligations, often leading to elevated stress levels and emotional disturbances (Verma & Sinha, 2017). These psychosocial pressures make women more vulnerable to mental health challenges such as anxiety, stress, and mood instability. The World Health Organization (2022) identifies mental health among women as a public

health priority and encourages non-pharmacological interventions for psychological well-being.

Among the various holistic approaches available, yoga has garnered substantial attention for its therapeutic potential in enhancing mental health. Rooted in ancient Indian philosophy, yoga is a multidimensional discipline comprising physical postures (asanas), breath control (pranayama), meditation (dhyana), and ethical principles (yamas and niyamas). Modern scientific investigations have consistently demonstrated the effectiveness of yoga in reducing psychological distress and promoting emotional stability (Woodyard, 2011). Physiologically, yoga practices influence the autonomic nervous system by enhancing parasympathetic activation and reducing sympathetic arousal, thereby lowering cortisol levels and alleviating symptoms of stress and anxiety (Streeter et al., 2012).

Several studies have reported that regular yoga practice leads to significant improvements in psychological parameters such as mood, resilience, and self-regulation (Ross & Thomas, 2010). In particular, women practitioners of yoga have shown enhanced emotional well-being, better stress management, and lower levels of depression and anxiety compared to non-practitioners (Michalsen et al., 2005; Rocha et al., 2012). Moreover, yoga provides a unique avenue for self-reflection, body awareness, and mindfulness—all of which contribute to improved mental health outcomes (Goyal et al., 2014).

Despite the growing body of evidence on yoga's psychological benefits, most existing studies tend to generalize findings across genders or focus primarily on clinical populations. There is limited empirical research that specifically investigates the impact of yoga on non-clinical women populations in relation to key psychological variables such as stress, anxiety, and emotional well-being. Furthermore, comparative

studies between yoga-practicing and non-practicing women are relatively scarce, especially in the Indian context where yoga is culturally embedded yet unevenly practiced across different population groups.

The present study is designed to address this gap by conducting a comparative investigation of selected psychological variables among women who practice yoga regularly and those who do not. By focusing exclusively on female participants, this research aims to generate gender-specific insights into the mental health benefits of yoga, contributing both to academic literature and to the design of community-level wellness programs. The study's outcomes may provide a deeper understanding of how yoga can serve as a preventive and promotive strategy for women's psychological health in contemporary society.

II. LITERATURE REVIEW

Khalsa, S. B. S. (2015). examined the role of yoga in psychiatric and mental health care and emphasized its positive impact on stress, anxiety, and depression. The paper concludes that yoga practices can serve as a complementary intervention for improving mental health outcomes, particularly useful for women facing emotional stress.

Goyal, M., et al. (2014). In a systematic review and meta-analysis of meditation and mindfulness programs, Goyal et al. found significant reductions in psychological stress across different populations. The findings reinforce the value of mind-body interventions such as yoga in reducing anxiety and improving psychological resilience.

Rocha, K. K. F., et al. (2012). This study demonstrated measurable improvements in stress reduction and emotional regulation among individuals following a six-month yoga practice. It highlights yoga's physiological and psychological benefits, especially for women coping with daily stressors.

Michalsen, A., et al. (2005). This paper reported a significant decrease in anxiety and stress symptoms among women after participating in an intensive three-month yoga program. The findings suggest that yoga can be an effective intervention for promoting emotional stability among women experiencing high psychological distress.

Woodyard, C. (2011). reviewed various scientific studies on the therapeutic effects of yoga, concluding that regular yoga practice improves quality of life,

mental clarity, and stress coping ability. This supports the core argument of your study focusing on psychological variables in women.

RATIONALE OF THE STUDY

Women are increasingly facing psychological issues such as loneliness, anxiety, depression, and stress due to multiple social and personal pressures. While yoga is known to promote mental well-being, there is limited research comparing its effects on these psychological variables specifically among women. This study aims to fill that gap by investigating the impact of yoga practice on selected psychological variables among women practitioners and non-practitioners, providing insights into yoga's potential as a non-pharmacological approach to enhance women's mental health.

OBJECTIVES OF THE STUDY

1. To assess the levels of loneliness among women who practice yoga and those who do not.
2. To compare the anxiety levels between women yoga practitioners and non-practitioners.
3. To evaluate the differences in depression levels among women practicing yoga and their non-yoga counterparts.
4. To investigate the impact of yoga practice on stress levels among women.
5. To determine whether there is a significant difference in overall psychological well-being (in terms of loneliness, anxiety, depression, and stress) between women yoga and non-yoga practitioners.

HYPOTHESES OF THE STUDY

1. There is no significant difference in the level of loneliness between women yoga practitioners and non-yoga practitioners.
2. There is no significant difference in the level of anxiety between women yoga practitioners and non-yoga practitioners.
3. There is no significant difference in the level of depression between women yoga practitioners and non-yoga practitioners.
4. There is no significant difference in the level of stress between women yoga practitioners and non-yoga practitioners.

III. METHODOLOGY

Research Design

The study employed a comparative research design to investigate selected psychological variables—loneliness, anxiety, depression, and stress—among women yoga practitioners and non-yoga practitioners. The objective was to examine differences in psychological well-being based on engagement in regular yoga practice.

Selection of Subjects

District	Yoga Practitioners	Non-Yoga Practitioners	Total
Shivamogga	50	50	100
Chikkamagaluru	50	50	100
Total	100	100	200

Variables and Tools Used

The following psychological variables and standardized tools were used for data collection:

Psychological Variable	Tool Used	Author/Year
Loneliness	UCLA Loneliness Scale	Russell & Peplau (1980)
Anxiety	Beck Anxiety Inventory (BAI)	Aaron T. Beck (1988)
Depression	Zung Self-Rating Depression Scale (SDS)	William W.K. Zung
Stress	Perceived Stress Scale (PSS)	Cohen, Kamarck & Mermelstein (1983)

Method of scoring

Psychological variables were scored using standardized tools. The UCLA Loneliness Scale (Russell & Peplau, 1980) includes 20 items rated on a 4-point scale, with higher scores indicating greater loneliness. The Beck Anxiety Inventory (Beck, 1988) has 21 items scored from 0 to 3, where higher scores reflect higher anxiety levels. Depression was measured using the Zung Self-Rating Depression Scale, with 20 items scored on a 4-point scale and converted to an index score; higher scores indicate more severe depression. The Perceived Stress Scale (Cohen et al., 1983) includes 10 items rated on a 5-point scale, with some reverse scoring; higher totals represent greater perceived stress. All scores were calculated as per respective manuals for analysis.

Procedure

Participants were briefed about the purpose of the study and assured of confidentiality and voluntary participation. The respective psychological questionnaires were administered in person in a controlled environment. Each participant completed all four standardized tools under the guidance of the researcher to ensure consistency and accuracy.

The yoga practitioners were individuals who engaged in regular yoga practice for a minimum of 30 minutes

A total of 200 women, aged 35 to 40 years, were selected as the study sample. The participants were drawn equally from two districts of Karnataka: Shivamogga and Chikkamagaluru. From each district, 50 women who practiced yoga regularly and 50 women who did not practice yoga were selected using purposive sampling. The final group distribution is as follows:

per session, at least 4 days a week, for the past 6 months. The non-yoga group included women who did not engage in any formal yoga or meditation practice.

Statistical Analysis

The collected data were systematically coded and subjected to statistical analysis. Descriptive statistics (mean, standard deviation) were computed for all variables. To test the significance of differences between the yoga and non-yoga groups, the independent samples t-test was applied at a 0.05 level of significance.

IV. RESULTS

Table 1: Descriptive Statistics of Selected Psychological Variables Among Yoga and Non-Yoga Women in Shivamogga District

Variables	Groups	N	Mean	Std. Deviation
Loneliness	Yoga Women	50	32.08	2.32
	Non-Yoga Women	50	39.84	2.59
Anxiety	Yoga Women	50	22.42	3.26
	Non-Yoga Women	50	42.18	4.27
Depression	Yoga Women	50	34.64	2.66
	Non-Yoga Women	50	39.86	6.97

Stress	Yoga Women	50	105.54	3.27
	Non-Yoga Women	50	124.50	1.67

The results presented in Table 1 and illustrated in Figure 1 indicate that women practicing yoga in Shivamogga district demonstrated significantly better psychological well-being compared to non-yoga practitioners. The yoga group recorded lower mean scores across all measured variables: loneliness

(32.08), anxiety (22.42), depression (34.64), and stress (105.54). In contrast, the non-yoga group showed notably higher scores: loneliness (39.84), anxiety (42.18), depression (39.86), and stress (124.50). These findings suggest that regular yoga practice may play a beneficial role in reducing psychological distress and enhancing emotional health among women.

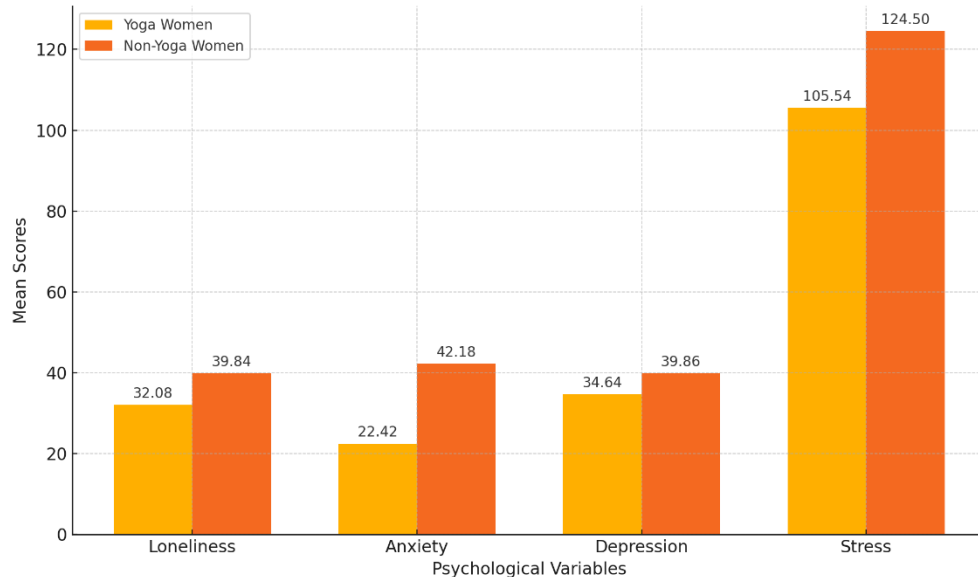


Figure 1: Comparison of Psychological Variables Between Yoga and Non-Yoga Women in Shivamogga District"

Table 2: Comparative Analysis of Psycho-Social Well-Being Between Yoga and Non-Yoga Women Practitioners in Shivamogga District

Variables	Groups	Mean±SD	't' score	Sig.
Loneliness	Yoga Women (N=50)	32.08±2.32	-15.781	.249
	Non-Yoga Women (N=50)	39.84±2.59		
Anxiety	Yoga Women (N=50)	22.42±3.26	-25.996	.012
	Non-Yoga Women (N=50)	42.18±4.27		
Depression	Yoga Women (N=50)	34.64±2.66	-4.949	.000
	Non-Yoga Women (N=50)	39.86±6.97		
Stress	Yoga Women (N=50)	105.54±3.27	-36.505	.000
	Non-Yoga Women (N=50)	124.50±1.67		

Table 2 presents the comparative results between yoga and non-yoga women in Shivamogga district across four psychological variables. The findings indicate that yoga practitioners had consistently lower mean scores in loneliness (32.08), anxiety (22.42), depression (34.64), and stress (105.54) compared to non-yoga practitioners, whose scores were notably higher. Statistically significant differences were observed in anxiety ($p = .012$), depression ($p = .000$), and stress ($p = .000$), suggesting that yoga has a positive effect in reducing psychological distress. However, the difference in loneliness ($p = .249$) was not statistically significant.

Table 3: Descriptive Statistics of Selected Psychological Variables Among Yoga and Non-Yoga Women in Chikkamagaluru District

Variables	Groups	N	Mean	Std. Deviation
Loneliness	Yoga Women	50	32.42	3.56
	Non-Yoga Women	50	39.04	3.17
Anxiety	Yoga Women	50	22.54	4.00
	Non-Yoga Women	50	39.84	4.55

Depression	Yoga Women	50	33.58	2.56
	Non-Yoga Women	50	39.54	6.24
Stress	Yoga Women	50	105.86	4.73
	Non-Yoga Women	50	124.34	2.40

The descriptive results in Table 3 reveal that women practicing yoga in Chikkamagaluru district showed better psychological well-being compared to non-yoga practitioners. The yoga group reported lower

mean scores across all four variables: loneliness (32.42), anxiety (22.54), depression (33.58), and stress (105.86). In contrast, the non-yoga group exhibited higher levels of psychological distress, with mean scores of loneliness (39.04), anxiety (39.84), depression (39.54), and stress (124.34). These findings suggest that regular yoga practice is associated with reduced psychological difficulties and enhanced emotional balance among women in this region.

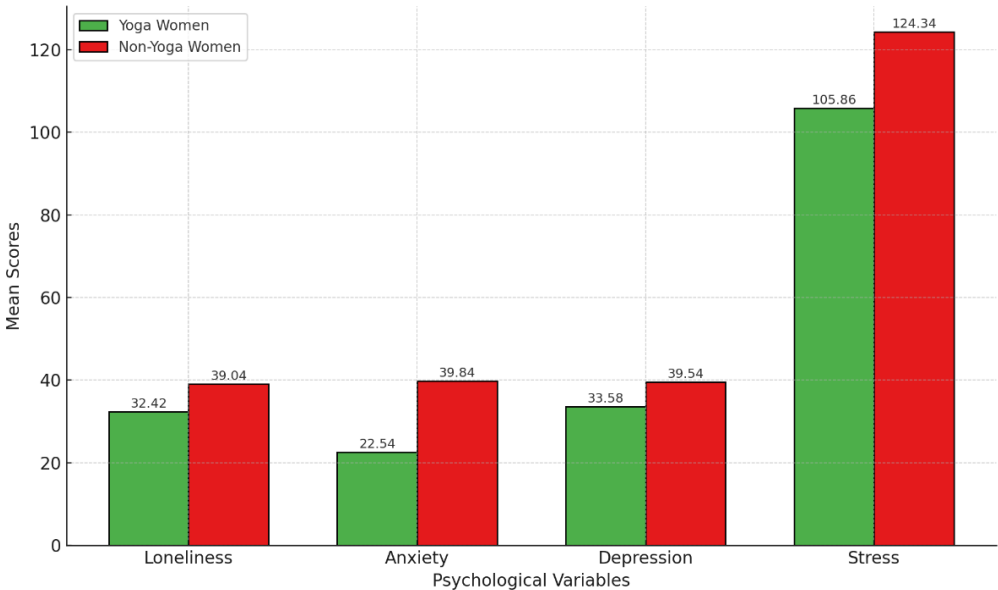


Figure 2: Comparison of Psychological Variables Between Yoga and Non-Yoga Women in Chikkamagaluru District

Table 4: Summary of Comparison Between Yoga and Non-Yoga Women Practitioners on Selected Psychological Variables in Chikkamagaluru District

Variables	Group	Mean±SD	t' score	Sig.
Loneliness	Yoga Women (N=50)	32.42±3.56	-9.817	.684
	Non-Yoga Women (N=50)	39.04±3.17		
Anxiety	Yoga Women (N=50)	22.54±4.00	-20.211	.023
	Non-Yoga Women (N=50)	39.84±4.55		
Depression	Yoga Women (N=50)	33.58±2.56	-6.249	.000
	Non-Yoga Women (N=50)	39.54±6.24		
Stress	Yoga Women (N=50)	105.86±4.73	-24.630	.000
	Non-Yoga Women (N=50)	124.34±2.40		

Table 4 presents the t-test results comparing psychological variables between yoga and non-yoga women in Chikkamagaluru district. The findings show that the yoga group had lower mean scores in all variables—loneliness (32.42), anxiety (22.54), depression (33.58), and stress (105.86)—compared to the non-yoga group. Significant differences were observed in anxiety ($p = .023$), depression ($p = .000$), and stress ($p = .000$), indicating that yoga practice had a positive effect on these aspects. However, the

difference in loneliness ($p = .684$) was not statistically significant.

V. DISCUSSION

The present study aimed to investigate selected psychological variables—loneliness, anxiety, depression, and stress—among women who practice yoga and those who do not, across two districts in Karnataka: Shivamogga and Chikkamagaluru. The

findings of the study align with existing literature supporting the beneficial effects of yoga on mental health, particularly in reducing psychological distress.

In both districts, the descriptive statistics revealed that women who practiced yoga reported consistently lower mean scores across all four psychological variables when compared to their non-yoga counterparts. Specifically, yoga practitioners experienced reduced levels of anxiety, depression, and stress, with the independent t-test results showing statistically significant differences in these three areas in both districts. This suggests that yoga has a significant impact on enhancing emotional regulation, reducing stress response, and improving mental balance.

Regarding the first hypothesis, which stated that there is no significant difference in loneliness between yoga and non-yoga women, the data revealed that although yoga practitioners had lower mean scores, the differences in loneliness were not statistically significant in either district (Shivamogga: $p = .249$; Chikkamagaluru: $p = .684$). Thus, H_0 (null hypothesis for loneliness) is accepted.

For the second hypothesis concerning anxiety, significant differences were found in both districts (Shivamogga: $p = .012$; Chikkamagaluru: $p = .023$), indicating that yoga significantly lowers anxiety levels among women. Hence, H_0 is rejected.

Similarly, for depression, yoga women reported significantly lower scores with highly significant p -values (Shivamogga: $p = .000$; Chikkamagaluru: $p = .000$), which confirms that yoga practice positively influences mood and emotional resilience. Therefore, H_0 is rejected.

With respect to stress, the results were again statistically significant ($p = .000$ in both districts), demonstrating that yoga helps in effective stress management, potentially due to its impact on physiological relaxation and coping mechanisms. Thus, H_0 is also rejected.

These findings are in line with prior research by Khalsa (2015), Goyal et al. (2014), and Michalsen et al. (2005), which reported improvements in psychological well-being as a result of consistent yoga practice. The study further validates the utility of yoga as a preventive and promotive mental health tool, especially among women facing psychosocial pressures.

VI. CONCLUSION

The study concludes that regular yoga practice significantly reduces anxiety, depression, and stress

among women, thus enhancing overall psychological well-being. While differences in loneliness were observed, they were not statistically significant. The results highlight the potential of yoga as an effective, non-pharmacological approach to address psychological challenges faced by women in contemporary society. Promoting yoga as part of daily routine and wellness programs may serve as a low-cost, holistic intervention to support women's mental health at both individual and community levels.

VII. RECOMMENDATIONS

1. Incorporate yoga into women's health and wellness programs to improve mental well-being, especially for women aged 35–40.
2. Promote yoga through public health campaigns at district and state levels to raise awareness about its psychological benefits.
3. Integrate yoga sessions in educational institutions and workplaces to help women manage stress, anxiety, and depression.
4. Encourage regular yoga practice (minimum 4 days/week) for long-term benefits on emotional stability and stress reduction.
5. Organize community-based training for female yoga instructors to enhance access and cultural relevance, especially in rural areas.
6. Conduct further research on loneliness and yoga, using longitudinal or mixed-method approaches, since current results were not statistically significant.

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